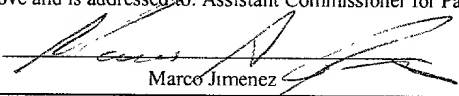


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Marco Jimenez

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the application of:

Kosei TERADA et al.

Serial No.: Not yet assigned

Filing Date: Concurrently herewith

For: METHOD AND DEVICE FOR
INCORPORATING ADDITIONAL
INFORMATION INTO MAIN
INFORMATION THROUGH
ELECTRONIC WATERMARKING
TECHNIQUE

Examiner: Unknown

Group Art Unit: Unknown

Parent Serial No.: 09/111,605

Parent Filing Date: July 7, 1998

PRELIMINARY AMENDMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

Applicants respectfully request entry and consideration of the following Preliminary Amendment before fees are calculated for the above-identified divisional patent application and before examination on the merits commences:

In the specification:

Please add the following paragraph on page 1, after line 4 (the title):

This is a division of U.S. patent application number 09/111,605, filed July 7, 1998, which application is hereby incorporated herein by reference.

09/111,605

In the claims:

Please **cancel** claims 1-23, and 35, 36, 42-51 and 53 in this application.

Please **amend** claims 24-34, 37-41 and 52 in this application as follows:

24. (Amended) A method of encrypting main information, data of said main information including a group of data units, said method comprising:

a first step of incorporating data of encrypting information, representative of an encrypting procedure, dispersedly into particular ones of the data units belonging to a predetermined first data group of said main information; and

a second step of executing the encrypting procedure, represented by said encrypting information, on the data belonging to a predetermined second data group of said main information.

25. (Amended) A method as recited in claim 24 wherein said first step further incorporates predetermined additional information, other than said encrypting information, into said first data group of said main information.

26. (Amended) An electronic information processing device for encrypting main information, data of said main information including a group of data units, said electronic information processing device comprising:

a first section that incorporates data of encrypting information, representative of an encrypting procedure, dispersedly into particular ones of the data units belonging to a predetermined first data group of said main information; and

a second section that executes the encrypting procedure, represented by said encrypting information, on the data belonging to a predetermined second data group of said main information.

27. (Amended) A machine-readable recording medium containing a program executable by a computer for encrypting main information, data of said main information including a group of data units, said program comprising:

a first step of incorporating data of encrypting information, representative of an encrypting procedure, dispersedly into particular ones of the data units belonging to a predetermined first data group of said main information; and

a second step of encrypting the data belonging to a predetermined second data group of said main information through the encrypting procedure represented by said encrypting information.

28. (Amended) A machine-readable recording medium containing data of first information including a group of data units and data of encrypting information representative of an encrypting procedure, the data of said encrypting information being incorporated dispersedly into particular ones of the data units belonging to a predetermined first data group of said main information, the data belonging to a predetermined second data group of said main information being encrypted through the encrypting procedure represented by said encrypting information.

29. (Amended) A method of decoding and reproducing encrypted main information, data of encrypting information being incorporated dispersedly into particular data units in a predetermined first data group of said main information, data belonging to a predetermined second data group of said main information being encrypted by an encrypting procedure represented by said encrypting information, said method comprising:

a first step of reproducing said encrypting information, from said first data group of said main information having said encrypting information incorporated therein; and

a second step of, on the basis of said encrypting information reproduced by said first step, decoding the data belonging to said second data group to thereby reproduce said main information.

30. (Amended) A device for decoding and reproducing encrypted main information, data of encrypting information being incorporated dispersedly into particular data units belonging to a predetermined first data group of said main information, data belonging to a predetermined second data group of said main information being encrypted by an encrypting procedure represented by said encrypting information, said device comprising:

a first section that reproduces said encrypting information, from said first data group of said main information having said encrypting information incorporated therein; and

a second section that, on the basis of said encrypting information reproduced by said first section, decodes the data belonging to said second data group to thereby reproduce said main information.

31. (Amended) A machine-readable recording medium containing a program executable by a computer for decoding and reproducing encrypted main information, data of encrypting information being incorporated dispersedly into particular data units belonging to a predetermined first data group of said main information, data belonging to a predetermined second data group of said main information being encrypted by an encrypting procedure represented by said encrypting information, said program comprising:

a first step of reproducing said encrypting information, from said first data group of said main information having said encrypting information incorporated therein; and

a second step of, on the basis of said encrypting information reproduced by said first step, decoding the data belonging to said second data group to thereby reproduce said main information.

32. (Amended) A method as recited in claim 24 wherein said first data group of said main information is classified into at least two characteristic groups according to data characteristics thereof, and said encrypting information is incorporated redundantly into said at least two characteristic groups.

33. (Amended) A method as recited in claim 32 wherein said first step incorporates said encrypting information into each of the characteristic groups in accordance with an algorithm unique to said characteristic group.

34. (Amended) A method as recited in claim 29 wherein said first data group of said main information is classified into at least two characteristic groups according to data characteristics thereof, and said encrypting information is incorporated redundantly into said at least two characteristic groups.

37. (Amended) A method as recited in claim 24 wherein said main information to be encrypted is provided in a form of a real-time data stream;

wherein said first step incorporates the data of encrypting information, in real time, into said main information of the real-time data stream, and said second step executes the encrypting procedure, in real time, on said main information of the real-time data stream; and

wherein said method further comprises a step of transmitting to a communication network said main information having said encrypting information incorporated therein and having been encrypted by said second step, in a form of the real-time data stream.

38. (Amended) A method as recited in claim 37 wherein said main information incorporates with additional information; and

wherein said main information is music performance information and said additional information contains data representative of any one of a text message, still picture, moving picture and sound message.

39. (Amended) A method as recited in claim 29 wherein said main information to be decoded is transmitted via a communication network, in a form of a real-time data stream;

wherein said method further comprises a step of receiving said main information of the real-time data stream transmitted via the communication network;

wherein said first step reproduces said encrypting information, from said first data group of said main information of the real-time data stream received via the communication network; and

wherein said second step decodes, on the basis of said encrypting information reproduced by said first step, the data belonging to said second data group of said main information of the real-time data stream received via the communication network to thereby decode said main information.

40. (Amended) A method as recited in claim 39 wherein said main information incorporates with additional information; and

wherein said further comprises a third step of detecting said additional information from the main information and a fourth step of displaying said additional information detected by said third step.

41. (Amended) A method as recited in claim 39 wherein said main information incorporates with additional information; and

wherein said main information is music performance information and said additional information contains data representative of any one of a text message, still picture, moving picture and sound message.

52. (Amended) A method as recited in claim 24 wherein said main information is music performance information; and

wherein said method further comprises a step of transmitting the music performance information after the execution of said encrypting procedure by said second step,

whereby at a receiving end, only portions, other than a particular portion corresponding to said data belonging to the predetermined second data group, of the music performance information can be reproduced by every person while the particular portion of the music performance information having undergone the encrypting can be reproduced only by an authorized person.

REMARKS

Claims 24-34, 37-41 and 52 are currently pending in the present divisional application with claims 1-23, 35, 36, 42-51 and 53 cancelled and claims 24-34, 37-41 and 52 preliminarily amended. Applicants respectfully submit that this application is in condition for allowance. Early and favorable consideration of the application is respectfully requested.

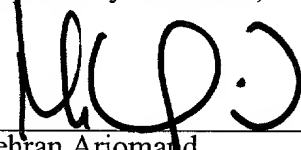
Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned "Version with markings to show changes made".

In the unlikely event that the transmittal letter is separated from this document and the Patent Office determines that an extension and/or other relief is required, Applicants petition for any required relief including extensions of time and authorizes the Assistant Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to Deposit Account No. 03-1952 referencing docket no. 39303.20038.10. However, the Assistant Commissioner is not authorized to charge the cost of the issue fee to the Deposit Account.

Respectfully submitted,

Dated: July 25, 2001

By:


Mehran Arjomand
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VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the claims:

24. (Amended) A method of [encoding] encrypting main information, data of said main information including a group of data units, said method comprising:

a first step of incorporating data of [encoding] encrypting information, representative of an [encoding] encrypting procedure, dispersedly into particular ones of the data units belonging to a predetermined first data group of said main information; and

a second step of executing the [encoding] encrypting procedure, represented by said [encoding] encrypting information, on the data belonging to a predetermined second data group of said main information.

25. (Amended) A method as recited in claim 24 wherein said first step further incorporates predetermined additional information, other than said [encoding] encrypting information, into said first data group of said main information.

26. (Amended) An electronic information processing device for [encoding] encrypting main information, data of said main information including a group of data units, said electronic information processing device comprising:

a first section that incorporates data of [encoding] encrypting information, representative of an [encoding] encrypting procedure, dispersedly into particular ones of the data units belonging to a predetermined first data group of said main information; and

a second section that executes the [encoding] encrypting procedure, represented by said [encoding] encrypting information, on the data belonging to a predetermined second data group of said main information.

27. (Amended) A machine-readable recording medium containing a program executable by a computer for [encoding] encrypting main information, data of said main information including a group of data units, said program comprising:

a first step of incorporating data of [encoding] encrypting information, representative of an [encoding] encrypting procedure, dispersedly into particular ones of the data units belonging to a predetermined first data group of said main information; and

a second step of [encoding] encrypting the data belonging to a predetermined second data group of said main information through the [encoding] encrypting procedure represented by said [encoding] encrypting information.

28. (Amended) A machine-readable recording medium containing data of first information including a group of data units and data of [encoding] encrypting information representative of an [encoding] encrypting procedure, the data of said [encoding] encrypting information being incorporated dispersedly into particular ones of the data units belonging to a predetermined first data group of said main information, the data belonging to a predetermined second data group of said main information being [encoded] encrypted through the [encoding] encrypting procedure represented by said [encoding] encrypting information.

29. (Amended) A method of decoding and reproducing [encoded] encrypted main information, data of [encoding] encrypting information being incorporated dispersedly into particular data units in a predetermined first data group of said main information, data belonging to a predetermined second data group of said main information being [encoded] encrypted by an [encoding] encrypting procedure represented by said [encoding] encrypting information, said method comprising:

a first step of reproducing said [encoding] encrypting information, from said first data group of said main information having said [encoding] encrypting information incorporated therein; and

a second step of, on the basis of said [encoding] encrypting information reproduced by said first step, decoding the data belonging to said second data group to thereby reproduce said main information.

30. (Amended) A device for decoding and reproducing [encoded] encrypted main information, data of [encoding] encrypting information being incorporated dispersedly into particular data units belonging to a predetermined first data group of said main information, data belonging to a predetermined second data group of said main information being [encoded] encrypted by an [encoding] encrypting procedure represented by said [encoding] encrypting information, said device comprising:

a first section that reproduces said [encoding] encrypting information, from said first data group of said main information having said [encoding] encrypting information incorporated therein; and

a second section that, on the basis of said [encoding] encrypting information reproduced by said first section, decodes the data belonging to said second data group to thereby reproduce said main information.

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31. (Amended) A machine-readable recording medium containing a program executable by a computer for decoding and reproducing [encoded] encrypted main information, data of [encoding] encrypting information being incorporated dispersedly into particular data units belonging to a predetermined first data group of said main information, data belonging to a predetermined second data group of said main information being [encoded] encrypted by an [encoding] encrypting procedure represented by said [encoding] encrypting information, said program comprising:

a first step of reproducing said [encoding] encrypting information, from said first data group of said main information having said [encoding] encrypting information incorporated therein; and

a second step of, on the basis of said [encoding] encrypting information reproduced by said first step, decoding the data belonging to said second data group to thereby reproduce said main information.

32. (Amended) A method as recited in claim 24 [of encoding and recording main information, data of said main information including a group of data units, said method comprising:

a first step of incorporating data of encoding information, representative of an encoding procedure, dispersedly into particular ones of the data units belonging to a predetermined first data group of said main information,] wherein said first data group of said main information [being] is classified into at least two characteristic groups according to data characteristics thereof, and said [encoding] encrypting information [being] is incorporated redundantly into said at least two characteristic groups[; and

a second step of encoding data belonging to a predetermined second data group of said main information by the encoding procedure represented by said encoding information].

33. (Amended) A method as recited in claim 32 wherein said first step incorporates said [encoding] encrypting information into each of the characteristic groups in accordance with an algorithm unique to said characteristic group.

34. (Amended) A method as recited in claim 29 [of decoding and reproducing encoded main information, data of encoding information being incorporated dispersedly into particular data units belonging to a predetermined first data group of said main information,] wherein said first data group of said main information [being] is classified into at least two characteristic groups according to data characteristics thereof, and said [encoding] encrypting information [being] is incorporated redundantly into said at least two characteristic groups[, data belonging to a predetermined second data group of said main information being encoded by an encoding procedure represented by said encoding information, said method comprising:

a first step of reproducing said encoding information from at least one of the characteristic groups of said main information having said encoding information incorporated therein; and

a second step of, on the basis of said encoding information reproduced by said first step, decoding the data belonging to said second data group to thereby reproduce said main information].

37. (Amended) A method as recited in claim 24 [of transmitting information comprising:] wherein said main information to be encrypted is provided in a form of a real-time data stream;

[a first step of providing main information to be transmitted, data of said main information including a group of data units each having a predetermined plurality of bits;

a second step of providing additional information to be incorporated into the data of said main information, said additional information including a plurality of data segments;

a third step of incorporating the data segments of said additional information provided by said second step into particular ones of the data units of said main information provided by said first step, in accordance with a predetermined encoding algorithm, prior to transmission of said main information; and]

wherein said first step incorporates the data of encrypting information, in real time, into said main information of the real-time data stream, and said second step executes the encrypting procedure, in real time, on said main information of the real-time data stream; and

wherein said method further comprises a [fourth] step of transmitting to a communication network said main information having said [additional] encrypting information incorporated therein and having been encrypted by said second step, in a form of the real-time data stream.

38. (Amended) A method as recited in claim 37 [where] wherein said main information incorporates with additional information; and

wherein said main information is music performance information and said additional information contains data representative of any one of a text message, still picture, moving picture and sound message.

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39. (Amended) A method [of reproducing main information and additional information from data received via a communication network, data of said main information including a group of data units each having a predetermined plurality of bits, said additional information including a plurality of divided data segments, said main information having the data segments of said additional information incorporated in the data units thereof in accordance with a predetermined encoding algorithm, said method comprising the steps of:] as recited in claim 29 wherein said main information to be decoded is transmitted via a communication network, in a form of a real-time data stream;

wherein said method further comprises a step of receiving said main information of the real-time data stream transmitted via the communication network;

[detecting the data units of said main information where the data segments of said additional information are incorporated, from the data] wherein said first step reproduces said encrypting information, from said first data group of said main information of the real-time data stream received via the communication network; and

[decoding the data units, detected by said step of detecting, in a manner corresponding to the predetermined encoding algorithm and thereby separating and reproducing the data segments of said additional information and the data units of said main information from among the detected data units] wherein said second step decodes, on the basis of said encrypting information reproduced by said first step, the data belonging to said second data group of said main information of the real-time data stream received via the communication network to thereby decode said main information.

40. (Amended) A method as recited in claim 39 [which further comprises] wherein
said main information incorporates with additional information; and

wherein said further comprises a third step of detecting said additional information from
the main information and a fourth step of displaying said additional information [reproduced]
detected by said third step [of decoding].

41. (Amended) A method as recited in claim 39 wherein said main information
incorporates with additional information; and

[where] wherein said main information is music performance information and said
 additional information contains data representative of any one of a text message, still picture,
 moving picture and sound message.

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52. (Amended) A method as recited in claim 24 [of transmitting] wherein said main information is music performance information [comprising the steps of:

applying special encoding to a particular portion of the music performance information coded in conventional form]; and

wherein said method further comprises a step of transmitting the music performance information after the [special encoding] execution of said encrypting procedure by said second step,

whereby at a receiving end, only portions, other than [the] a particular portion corresponding to said data belonging to the predetermined second data group, of the music performance information [coded in conventional form] can be reproduced by every person while the particular portion of the music performance information having undergone the [special encoding] encrypting can be reproduced only by an authorized person.